

REMARKS

The independent claims 27, 40 and 47 stand rejected under 35 USC 103 over Gulati in view of Bampton and McLaughlin.

Some of the examiner's statements in support of the rejection of claim 27 are irrelevant to the limitations of the claims. For example, the examiner states that the tank of Gulati "is produced at least mainly from prefabricated structure elements of few different types so that plane elements meant as shell elements ... are produced," but applicant's claims do not refer to prefabricated structure elements, or to different types, or to shell elements.

Applicant will assume for the purpose of this discussion that it would have been obvious to form one or more components of the tank shown by Gulati by extrusion of aluminum. However, applicant does not concede that this is the case and explicitly reserves the right to present evidence showing that it would not in fact have been obvious to form components of the tank shown by Gulati by extrusion of aluminum.

Extrusion is a well known process for forming profile elements of aluminum. Such profile elements are of indeterminate length and are uniform in cross section over their entire length. In accordance with claim 27, each first mechanically extruded aluminum profile element has a plane part and a stiffening part extending essentially perpendicular to the plane part and having a free distal end relative to the plane part. The nature of the extrusion process dictates that the stiffening part is integral with the plane part and is formed simultaneously with the plane part.

The examiner's reliance on McLaughlin as rendering it obvious to modify the method of Gulati by forming elements by extrusion of aluminum is not coextensive with the relevant limitations of applicant's claim 27. Thus, claim 27 recites the step of providing first mechanically extruded aluminum profile elements each having a plane part and a stiffening part extending essentially perpendicular to the plane part and having a free distal end relative to the plane part but the examiner has not suggested or argued that any

component of the tank shown by Gulati comprises a plane part and a stiffening part integral with the plane part and formed simultaneously with the plane part.

Claim 27 requires that an intermediate element be formed by attaching the first profile elements to each other by their plane parts using friction welding, the plane parts of the first profile elements being substantially coplanar.

The examiner appears to take the position that the plates 86 shown in FIG. 5A of Gulati are apt counterparts of the plane parts of the first profile elements recited in claim 27 and that the stiffeners 27 and stringers 28 of Gulati are apt counterparts of the stiffening part recited in claim 27. Thus, the plate cover 17 of the panel 83 may comprise multiple plates 86 joined together. It therefore appears that the examiner considers the combination of the plate 86 and stiffeners 27 and stringers 28 to constitute an apt counterpart for a first profile element as recited in claim 27. The examiner has not clearly indicated whether she considers the plate cover 17 or the combination of the plate cover and the stiffeners 27 and stringers 28 to be a counterpart for the intermediate element of claim 27. Regardless, applicant submits that Gulati does not disclose a first profile element within the meaning of claim 27 and, in particular, that the combination of the plate 86 and stiffeners 27 and stringers 28 does not constitute an apt counterpart for a first profile element.

Gulati discloses in paragraph [0015] that the tank comprises three principal components: an internal truss frame structure, a grillage of stiffeners and stringers interconnected and attached to the truss frame structure, and a plate cover attached to the periphery of the grillage. Paragraph [0015] emphasizes that the term "plate" or "plate cover" means either one substantially smooth and substantially flat body of substantially uniform thickness or two or more substantially smooth and substantially flat bodies, each of substantially uniform thickness, joined together by welding or other suitable method.

Paragraph [0036] explains that the tank may be constructed of substantially identical end sections and substantially identical mid sections interposed between the end sections. Each end section comprises parts of vertical longitudinal trusses that when connected to

similar parts of longitudinal trusses of an adjoining mid section will provide continuous vertical longitudinal trusses. Each end section and each mid section comprises one or more transverse trusses.

Paragraph [0037] elaborates on paragraph [0015] and explains that the tank 10 comprises an internal truss frame structure 18, a grillage of stiffeners 27 and stringers 28 attached to the truss frame structure, and a thin plate cover 17 attached to the grillage.

In accordance with paragraphs [0040] and [0041], each section of the tank may be composed of multiple panels 83, 84 and 85, each comprising the plate cover, stiffeners, stringers and a gridwork of structural members that form part of the internal truss frame structure. The plate cover 17 of a given panel may be composed of multiple plates 86 that are joined together and are attached to the grillage and part of the truss frame structure. Paragraph [0042] explains that fabrication of a panel includes cutting plate cover elements, stiffener elements, stringer elements and truss frame member elements from plate material and joining the elements together to form the panel.

Applicant submits that it is clear from the disclosure of Gulati, and particularly the passages discussed above, that the plate cover is attached to the grillage of stiffeners and stringers after the respective components, i.e. the plate cover and the grillage, have been fabricated, which necessitates that the plate cover be fabricated as a separate component from the grillage. Applicant further submits that it would not have been obvious to form the combination of the plate cover 17 or plate 86 and the stiffeners 27 and/or stringers 28 by extrusion. It follows from the nature of the extrusion process that if the plate 86, for example, and the stiffeners 27 and/or stringers 28 were respective parts of a profile element formed by extrusion, the plate and the grillage would be formed simultaneously and the plate could not be attached to the grillage after the respective components had been fabricated. This would run counter to the teaching of Gulati.

The subject matter of claim 27 also distinguishes over the prior art by reciting that the stiffeners attached to the first and third plane elements extend only partly through the

internal space of the volume unit between said first and third sides thereof. It is clear from Gulati (see, for example, paragraph [0036], discussed above) that the truss structure extends the entire distance, without interruption, between the opposite sides of the tank.

In view of the foregoing it is submitted that the subject matter of claim 27 is not disclosed or suggested by Gulati, Bampton and McLaughlin, whether taken singly or in combination. Therefore, claim 27 is patentable and it follows that the dependent claims 28-39 and 48 also are patentable.

The arguments presented above in support of claim 27 are also applicable to the independent claims 40 and 47. Therefore claims 40 and 47 and the dependent claims 41-46 are patentable.

Respectfully submitted,

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